Claims

1. Recombinant virus based on MVA, preferably a recombinant MVA virus, comprising at least one nucleic acid coding for a *Plasmodium falciparum* MSP-1 protein, a fragment or a mutein of it.

2. Recombinant virus according to Claim 1, characterised in that the MSP-1 protein is the MSP-1 protein of the isolate 3D7 or the MSP-1 protein of the FCB1 strain.

3. Recombinant virus according to Claim 1 or 2, characterised in that the fragment is selected from the fragments p83, p30, p38, p33, p19 and p42 or combinations of them.

4. Recombinant virus according to one of the Claims 1 to 3, characterised in that the mutein is differentiated from the MSP-1 sequence by addition, deletion, insertion, inversion and / or substitution of one or more amino acids.

5. Recombinant virus according to one of the Claims 1 to 4, characterised in that the nucleic acid coding for MSP-1 is reduced in its AT content compared to the wild type sequence.

6. Recombinant virus according to one of the Claims 1 to 5, characterised in that the nucleic acid is under the control of a promoter.

7. Recombinant virus according to one of the Claims 1 to 6, characterised in that the nucleic acid at the 5' end is fused with a nucleotide sequence coding for a signal peptide sequence.

8. Recombinant virus according to Claim 7, characterised in that the signal peptide sequence controls the secretion of the gene product.

9. Recombinant virus according to Claim 7, characterised in that the signal peptide sequence controls the localisation of the gene product relevant to the membrane.

10. Recombinant virus according to Claim 7, characterised in that the signal sequence controls the GPI anchoring of the gene product.

11. Method of production of a recombinant virus based on MVA, wherein the method comprises the steps:

    a) transfecting of a eukaryotic host cell with a transfer vector, wherein

i) the transfer vector comprises a *Plasmodium falciparum* MSP-1 protein, a nucleic acid coding a fragment or a mutein thereof, wherein the mutein differs - by the addition, deletion, insertion, inversion and / or substitution of one or more amino acids - from the MSP-1 sequence; and optionally also comprises a selection marker;

ii) the nucleic acid according to i) is flanked by MVA sequences 5' and / or 3', wherein the sequences are suitable for the homologous recombination in the host cell;

b) infection with a virus based on MVA, preferably MVA;

c) cultivation of the host cell under conditions suitable for homologous recombination; and

d) isolation of the recombinant virus based on MVA.

12. Method according to Claim 10 or 11, characterised in that the virus is isolated from the culture supernatant or from the cultivated host cells.

13. Vaccine comprising:

a) the recombinant virus according to one of the Claims 1 to 9; and

b) a pharmacologically compatible carrier.

14. Vaccine according to Claim 13, characterised in that the vaccine also contains as constituent c) MSP-1, a fragment or a mutein of it and / or a nucleic acid coding for one of them.

15. Vaccine according to Claim 14, characterised in that the constituents a) and c) can be administered simultaneously, sequentially or separately.

16. Use of the recombinant virus according to one of the Claims 1 to 9 for the prophylaxis and / or therapy of malaria.

17. Use of the recombinant virus according to one of the Claims 1 to 8 and of MSP-1, a fragment or a mutein of it and / or a nucleic acid coding for them for the prophylaxis and / or therapy of malaria.